

Focus Report
New Chemicals Program
PMN Number: **L-14-0069**

Focus Date: 01/06/2014 12:00:00 AM Report Status: Completed
Consolidated Set:
Focus Chair: Jim Alwood Contractor: Olga Svetlitskaya

I. Notice Information

Submitter: [REDACTED] CAS Number: [REDACTED]
Chemical Name: [REDACTED]
Use: Cross-linking agent for polymer gels in oil and gas recovery applications. [REDACTED]
P2REC: CRSS: FWD. P2 Claim: The LVE material can be used in in deep, hot, high pH wells, where it may replace currently used zirconates that contain hazardous and flammable triethanolamine.
Other Uses: [REDACTED]
PV-Max: [REDACTED] Kg/yr Binding Option: No
Manufacture: X Import:

II. SAT Results

(1) Health Rating: 1-2 Eco Rating: 2 Comments: ;
Occupational: 1B Non-Occupational: NR Environmental: NR
(1) PBT: 1 1 Comments:
Awaiting Human Health Entry
Awaiting Human Health Entry
Awaiting Human Health Entry

III. OTHER FACTORS

Categories:

Health Chemical Category: Ecotox SAR and TSCA New Chemical Category: [REDACTED]

Related Cases/Regulatory History:

Health related Cases: [REDACTED]
Ecotox Related Cases: [REDACTED]
Regulatory History: [REDACTED]
- SR DIV DIR BRIEF'G DROP
- GRANTED
- FOCUS DROP
- FOCUS DROP
CRSS P2Rec: P2Rec-P2 Recognition

MSDS/Label Information:

MSDS: Yes Label: No
General Equipment: appropriate chemical resistant gloves / splash resistant safety goggles or face shield, as appropriate / ventilation should effectively remove and prevent buildup of any aerosols or mists generated from the handling of this product. Ensure compliance with applicable exposure limits.
Respirator: Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134).
Health Effects: May cause allergic skin reaction, inflammation, and burns. Causes eye irritation. May be harmful if inhaled. May be harmful if swallowed.
TLV/PEL (PMN or raw [REDACTED] - ACGIH TWA; OSHA PEL TWA; NIOSH TWA (as Zr,

material): related to Zirconium compounds) - [REDACTED] - ACGIH STEL;
NIOSH STEL (as Zr, related to Zirconium compounds)
LVEPPE: hard hat, metatarsal steel-toed boots, chemical resistant gloves, and safety glasses.

Exposure Based Information:

Exposure Based Review: N
Exposure Based Review (Eco): N
Exposure Based Review
(Non Occupational):

Exposure Based Review (Health):
Exposure Based (Occupational): No
Exposure Based (Environmental):

IV. Summary of SAT Assessment

Fate:

Fate Summary:

L-14-0069
FATE: Estimations for anion citric acid MW 192 C6H8O7
log Kow = -1.64 (M)
log Koc = 1.00 (E)
log Fish BCF = 0.50 (E)
log Fish BAF = -0.05 (E)
PMN Substance: [REDACTED]
[REDACTED] C (E)
[REDACTED]
POTW removal (%) = 90-99 via biodeg
Time for complete ultimate aerobic biodeg ≤ day
Sorption to soils/sediments = low
PBT Potential: P1B1
*CEB FATE: Migration to ground water = negl

Health:

Health Summary:

Not absorbed from the skin, absorbed from the lung (pchem), absorbed from the GI tract (analog).
Concern for irritation to all tissues based on the reported pH [REDACTED]

Ecotox:

Ecotox Values:

Fish 96-h LC50: >100(P)
Daphnid 48-h LC50: >100(P)
Green algal 96-h EC50: 11(P)
Fish Chronic Value: >10(P)
Daphnid ChV: >10(P)
Algal ChV: 2.2(P)

Ecotox values comments:

Predictions are based on SAR predictions for [REDACTED]
[REDACTED]; effective concentrations based on
100% active ingredients and mean measured concentrations of Zr; hardness <180.0 mg/L as
CaCO₃; and TOC <2.0 mg/L;

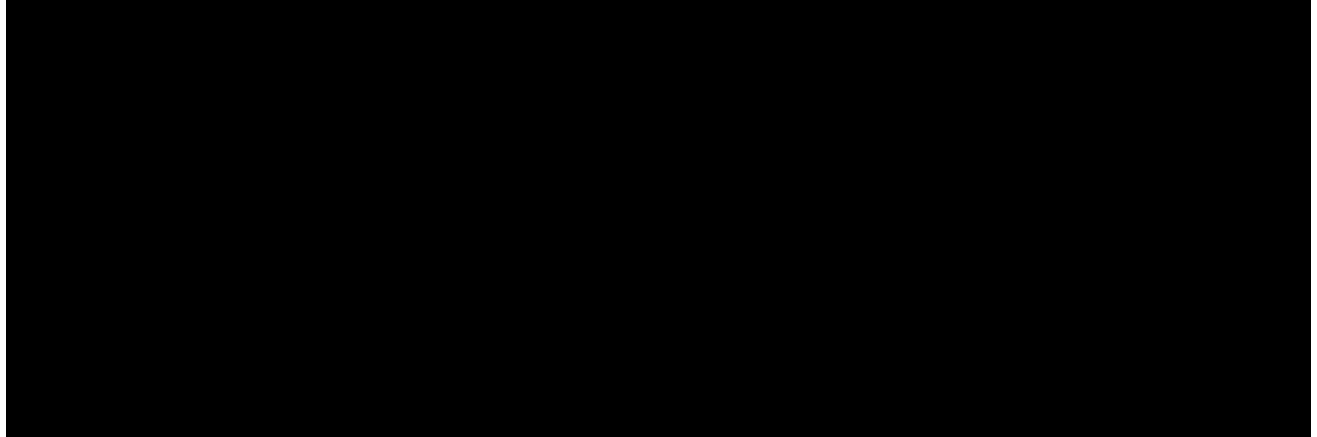
Ecotox Factors:

Assessment Factor: 10
Concern Concentration:
- Acute Value
Concern Concentration: 220
- Chronic Value

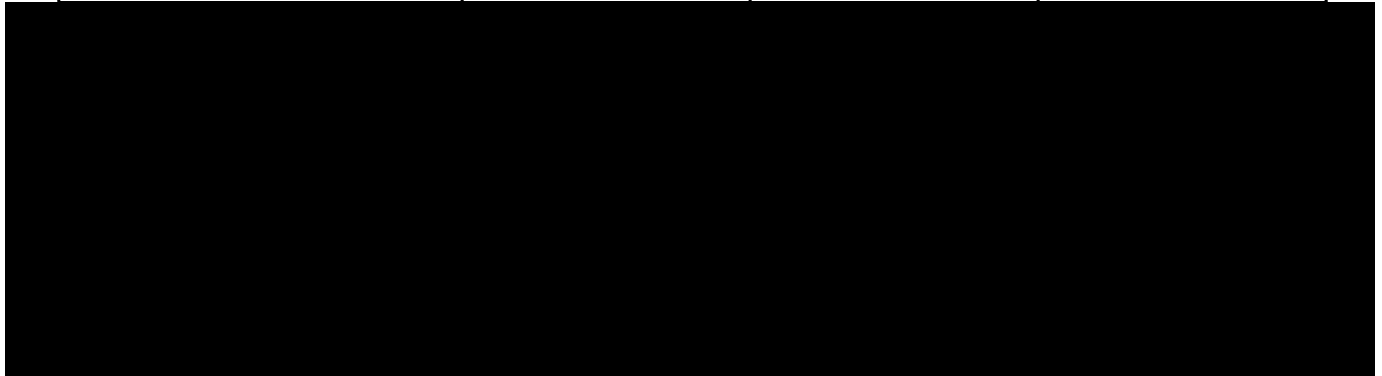
V. Summary of Exposures/Releases

Engineering Summary: L-14-0069

Exposures/Releases	Release	Release	Release
Scenario	Manufacturing: Batch	Use: Oil and Gas Well Production	Use: Oil and Gas Well Production



Engineering Summary: Exposures/Releases	Exposure	Exposure	
Scenario	Manufacturing: Batch	Use: Oil and Gas Well Production	



VI. Focus Decision and Rationale

Regulatory Actions

Regulatory Decision: LVE Final Conditional Grant

Decision Date: 01/06/2014

Type of Decision:

Rationale:

L-14-0069 was given a final conditional grant based on warnings in the MSDS. Human health hazard concerns were low-moderate for dermal and inhalation exposures. Potential risks to workers were mitigated by appropriate dermal PPE and negligible inhalation exposures. Ecotoxicity hazard concerns were moderate based on SAR predictions for [REDACTED]. Potential risks to the environment were low due to fewer than 20 days of exceedances of the COC during the release period. [REDACTED]. [REDACTED] The P2REC was not forwarded.

COC: Chronic – 220 ppb, Acute – 2,750 ppb

Summary of Exposures and Releases

Manu

[REDACTED]

Releases to Water:

[REDACTED]

Fate Releases to Water (90% Removal)

[REDACTED]

DW: LADD: 4.23E-06 mg/kg/day, [REDACTED]

FI: LADD: 5.72E-08 mg/kg/day, [REDACTED]

Use

[REDACTED]

[REDACTED]

Fate Releases to Water (90% Removal)

[REDACTED]

DW: LADD: 1.46E-05 mg/kg/day, [REDACTED]

FI: LADD: 1.97E-07 mg/kg/day, [REDACTED]

[REDACTED]

PDM2

Fate Releases to Water (90% Removal)

[REDACTED]

DW: LADD: 2.09E-07 mg/kg/day, [REDACTED]

FI: LADD: 2.83E-09 mg/kg/day, [REDACTED]

P2 Rec Comments:

Testing:

Final Recommended:

Health:

Eco:
Fate:
Other:

12/04/2015 09:31:01 AM

SAT Report

PMN Number: **L-14-0069**

SAT Date: **12/24/2013**

Print Date: **12/4/2015**

Related cases:

Health related cases:

Ecotox related cases:

Concern levels:

Type of Concern:	<u>Health</u>	<u>Eco</u>	<u>Comments</u>
Level of Concern:	1-2	2	

<u>Persistence</u>	<u>Bioaccum</u>	<u>Toxicity</u>	<u>Comments</u>
1	1	1	
		Awaiting	
		Human Health	
		Entry	
		Awaiting	
		Human Health	
		Entry	
		Awaiting	
		Human Health	
		Entry	

Exposure Based Review:

Health:

Ecotox: No

Routes of exposure:

Health: Dermal Inhalation

Ecotox: All releases to water

Fate: ;

Keywords:

Keywords:

Summary of Assessment:

Fate:

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FATE: Estimations for anion citric acid MW 192 C6H8O7

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PMN Substance: [REDACTED]

POTW removal (%) = 90-99 via biodeg

Time for complete ultimate aerobic biodeg ≤ day

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PBT Potential: P1B1

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Ecotox:

Test Organism	Test Type	Test End Point	Predicted	Measured	Comments
fish	96-h	LC50	>100		
daphnid	48-h	LC50	>100		
green algal	96-h	EC50	11		
fish	—	chronic value	>10		
daphnid	—	chronic value	>10		
algal	—	chronic value	2.2		
Sewage Sludge	3-h	EC50	—		
Sewage Sludge	—	Chronic Value	—		

Ecotox Values Comments: Predictions are based on SAR predictions for [REDACTED]

[REDACTED] effective concentrations based on 100% active ingredients and mean measured concentrations of Zr; hardness <180.0 mg/L as CaCO₃; and TOC <2.0 mg/L;

Factors	Values	Comments
Assessment Factor	10	
Concentration of Concern (ppb)		

Acute		
Concentration of Concern (ppb) Chronic	220	
SARs		
SAR Class		
TSCA New Chemical Category		

Ecotox Factors Comments:

SAT Chair: L Keifer 564-8916

Fate assessor: **Ecotox assessor:** **Health assessor:**